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The Impact of Direct Writing Conventions Instruction on Second Grade Writing Mechanics Mastery

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by
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Approval Page

This applied dissertation was submitted by Kristen I. Sheehan under the direction of the persons listed below. It was submitted to the Abraham S. Fischler School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova Southeastern University.

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Statement of Original Work

I declare the following:

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April 20, 2015

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Abstract

The Impact of Direct Writing Conventions Instruction on Second Grade Writing Mechanics Mastery. Kristen I. Sheehan, 2015: Applied Dissertation, Nova Southeastern University, Abraham S. Fischler School of Education. ERIC Descriptors: Grammar, Writing Workshop, Mini-Lessons, Writing Instruction, Writing Skills, Writing Strategies

This applied dissertation was designed to determine the impact of direct writing conventions instruction on second grade writing mechanics mastery at an independent school in southeast Florida. The research study utilized a nonexperimental quantitative method. The design was pretest-posttest with a control. The pretest-posttest assessment was the Children's Progress Academic Assessment. The score utilized in the analysis was the Phonics/Writing subtest. De-identified data were collected and analyzed from two separate second grade classes from two consecutive school years (i.e., 2011-2012, 2012-2013). The control group consisted of 43 second graders who received writing conventions instruction in the context of student writing during individual and small group conferences. The control group received no direct writing conventions instruction. The treatment group consisted of 39 second graders who received direct writing conventions instruction through the use of mini-lessons during the writing workshop. An analysis of the de-identified data revealed that, although the treatment group mean change score had a positive change greater than the control group change score, the change was not statistically significant. The researcher failed to reject the null hypothesis relative to a statistically significant difference between the two groups. Recommendations were made for future research.

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Chapter 1: Introduction

Statement of the Problem

The topic. The topic for this study was to examine the impact of a direct writing conventions instructional strategy on second grade writing mechanics mastery. During the 2012-2013 school year at the research site, writing conventions instruction was embedded into the writing workshop model via individual conferences or small group lessons. The conventions were taught by the writing teacher in the context of a student's writing when a convention error was found during the editing process. There was no direct writing conventions instruction in the second grade as part of the writing workshop model at the research site. The direct instruction for this study was delivered using mini-lessons during the writing workshop. The writing workshop is an instructional approach that includes direct instruction on an explicit writing strategy through the mini-lesson (Calkins, 1994). The mini-lessons for this study were created based on the most common, frequent writing mechanics and conventions errors found in second graders' writing, and the skills listed in the Second Grade Grammar Scope and Sequence currently being used at the research site. Writing mechanics mastery was measured by scores on the Phonics/Writing section of the Children's Progress Academic Assessment (CPAA).

In the recent literature, the term writing conventions is currently being used more frequently than the former term grammar and mechanics. Therefore, these two terms are considered synonymous, and the term writing conventions was used whenever possible for the purpose of this study. Several research studies support the idea that writing conventions are most beneficial to students when taught in the context of reading and writing (Cramer, 2004; Patterson, 2001; Weaver, 1998; Weaver, McNally, & Moerman,

2001). This study was conducted in three second-grade classrooms at an independent school in southeast Florida.

The research problem. The problem for this research study was poor use of conventions in writing. Writing conventions are generally accepted rules of written English and language use that include grammar, spelling, punctuation, capitalization, and paragraphing. The writing instructional technique at the research site did not result in mastery of the concepts and skills in writing mechanics. According to the CPAA Administrator's Report generated at the research site, second grade scores on the Phonics/Writing section of the CPAA declined from a grade equivalency average of 3.4 at the end of school year 2009-2010 to a grade equivalency average of 2.9 at the end of school year 2011-2012. Additionally, the percentage of students in second grade who scored below grade level at the Approaching Expectation Level on the Phonics/Writing section of the CPAA increased from 6% at the end of school year 2009-2010 to 27% at the end of school year 2011-2012.

Background and justification. The problem of poor writing performance in the area of writing conventions was not limited to the research site for the study. According to The Nation's Report Card (National Center for Educational Statistics, 2012), only 27% of the nation's eighth-graders and twelfth-graders performed at the Proficient level in writing. Throughout the country, schools have been turning to organizations like The National Writing Project to improve poor student performance on writing tests (Troia, Shankland, & Heinz, 2010). In 2012, representatives from the Florida Department of Education stated that due to the increased attention to the correct use of grammar and conventions in the scoring process, the percentage of students scoring a 3.0 or higher on

the Florida Comprehensive Assessment Test (FCAT) in writing went from 97% in 2011 to 81% (Strauss, 2012). In order for students to meet 21st century demands in both society and the future workforce, they need to be able to write coherent ideas supported by organized, clear, and understandable standardized language (Kirby, Kirby, & Liner, 2003). The elementary students at the research site had not demonstrated proficient achievement levels in written language skills to meet this demand successfully.

Deficiencies in the evidence. Numerous studies supported the importance of teaching grammar and conventions in the context of student writing (Cramer, 2004; Tompkins, 2002; Weaver, 1996, 1998, 2008). There are also a number of research studies that reinforced the idea that teaching grammar in isolation has negative effects on student writing (Patterson, 2001). Even though many studies concluded grammar and conventions should be taught in context, there was a deficiency in the research dealing with the instructional methods of how grammar and conventions should be included in instructional writing techniques. Using the key terms *grammar and mechanics* in the Education Resource Information Center (ERIC) database, 47 studies were found. However, using the key terms *grammar and mechanics* and *instructional strategy,* only three studies were found. Based on this deficiency and the gap in the literature, the need existed for research that tested the effectiveness of different methods of and approaches to teaching grammar and conventions in the context of writing (Weaver, 2008). This need was addressed by this study, which examined the impact of direct writing conventions instruction on second grade writing mechanics mastery.

Audience. The primary audience for this study is elementary classroom writing teachers and literacy coaches. These two groups can benefit from the information

produced by this research study because the results may provide research on the effectiveness of direct instruction of conventions through mini-lessons as an added component of the writing workshop model. Elementary school principals and professional development leaders may also benefit from the information by using it in planning and organizing effective professional development for their faculty and staff.

Setting of the Study

The research study took place in three second-grade classrooms at an independent, college preparatory, coed, day school in southeast Florida. During the 2012-2013 school year, there were 39 students in the second grade divided among three classrooms. The total enrollment of the school was 1,096 students. The school is divided into three divisions: an Upper School, a Middle School, and a Lower School. The Upper School is located on a separate campus from the Middle and Lower Schools. The total enrollment for the Lower School during the 2012-2013 school year was 422 students.

Definition of Terms

The list of terms is intended to provide the reader with the meanings for key words and phrases relevant to this research study.

Children's Progress Academic Assessment. Camacho (2010) explained that the Children's Progress Academic Assessment (CPAA) is a computer-adaptive, formative assessment of early literacy and mathematics for the target population of students in grades pre-K through three. It tests the sub-concepts of phonemic awareness, phonics and writing, reading and reading mechanics, measurement, numeracy, operations, and patterns and functions. During the administration of the test, the computer automatically adjusts the questions based on the student's performance on previous questions. Scores

are presented in a numerical grade equivalent average combined with a narrative summary and in a numerical expectation score. The numerical expectation score is based on a four-point scale and is correlated to a grade expectation. The breakdowns of the numerical expectation are 1 (Below Expectation), 2 (Approaching Expectation), 3 (At Expectation), and 4 (Above Expectation).

Conference. A conference is a planned discussion to provide instruction for a specific and identified student need. During the independent practice and application time of writing workshop, the teacher meets with students for individualized instruction based on the errors found in the student's writing (Calkins, 1994).

Direct writing conventions instruction. Direct writing conventions instruction is being operationally defined for the purpose of this research study as specific writing conventions mini-lessons taught during writing workshop. Writing conventions mini-lessons were created based on the most common, frequent writing mechanics and conventions errors found in second graders' writing and the skills listed in the Second Grade Grammar Scope and Sequence currently being used at the research site.

Mini-lesson. The mini-lesson is a brief, structured and focused lesson that provides the students with direct instruction on a specific writing strategy. The components of a mini-lesson include a teaching point, connection to a prior concept, direct instruction, active engagement, and independent practice and application. The students first gather as a group, observe the writing strategy being modeled by the teacher, and then practice the strategy for immediate feedback before moving to the independent practice and application part of the writing workshop. The mini-lesson is designed to be short usually lasting no more than 15 minutes (Calkins, 1994).

Phonics/ Writing CPAA subtest. The Phonics/ Writing subtest of the CPAA measures achievement in spelling, paragraph completion, and editing of punctuation, capitalization, contractions, syntax, verb tense, possessive nouns, plurals, and pronouns (Camacho, 2010).

Writing conventions. Writing conventions is defined as a set of accepted standards and rules for written English and language use. Conventions include spelling, punctuation, capitalization, grammar, and paragraphing (Culham, 2005). The term writing conventions was used synonymously with the term grammar and mechanics for this study.

Writing mechanics mastery. Writing mechanics mastery is defined as correctly applying the skills associated with the editing of punctuation, capitalization, contractions, syntax, verb tense, possessive nouns, plurals, pronouns, and paragraph completion (Camacho, 2010). Writing mechanics mastery for this research study was measured by the scores on the Phonics/Writing section of the CPAA.

Writing workshop. Writing workshop is an instructional approach that includes direct instruction on an explicit writing strategy through the mini-lesson, guided practice, independent writing time and application with teacher conferences and small-group work, and concludes with student share sessions (Calkins, 1994; Fountas & Pinnell, 2000). The terms writing workshop and writer's workshop are used interchangeably in the literature.

Purpose of the Study

The purpose of the quantitative research study was to determine the impact of a direct writing conventions instructional strategy on the CPAA scores of independent school second graders. The purpose was achieved by comparing Fall CPAA

Phonics/Writing scores with Spring CPAA Phonics/Writing scores. The CPAA scores of second graders from previous years who did not receive direct instruction in writing conventions were also compared to the CPAA scores of the second graders who did receive direct instruction in writing conventions.

Chapter 2: Literature Review

Introduction

The literature sources that have been reviewed were selected based on relevancy to the study's purpose. The literature review has been organized into seven sections: (a) history of writing instruction, (b) theoretical perspective, (c) importance of writing, (d) writing workshop, (e) the mini-lesson and direct conventions instruction, (f) grammar and conventions, and (g) writing assessment.

History of Writing Instruction

In order to understand writing instruction in the 21st century, it is important to acknowledge the history and events that have influenced writing and writing instruction since the middle of the 19th century. Up until that time, schooling focused on children becoming readers because it was believed that through reading, society could control its citizens, but citizens could exert their own control through writing (Monaghan & Saul, 1987). The instruction of writing in elementary grades was little more than instruction in handwriting and penmanship (Yancey, 2009). Composition instruction was a focus only in high schools for the purpose of college preparation (Hobbs & Berlin, 2001).

The shift from writing instruction being viewed as handwriting instruction to writing instruction as composition occurred in 1845 when Horace Mann and the Boston School Committee advocated that student achievement should be assessed utilizing a written exam (Reese, 2013). Mann observed that evaluations based on students' oral responses to exam items were uneven and results were subject to the evaluator's perception, but tests based on students' written responses to exam items were more consistent and could be graded more reliably (Yancey, 2009). This was the first instance

an exam based on students' written responses to exam items being used as an objective measure of student achievement (Reese, 2013).

As a result of the Morrill Federal Land Grant Act in 1862 and its renewal in 1890, the purpose of composition in schools changed. The Morrill Federal Land Grant Act called for the establishment of agricultural and technical schools. Colleges began accepting both men and women from a wide variety of social classes, races, and literacy backgrounds (Richardson, 2008). College composition courses were created to address this literacy diversity and in the mid-1870s, Harvard University required a written essay on a literary work as part of its admission requirements (Richardson, 2008). High schools began to prepare students to meet the new written requirements with guidance from the Conference of English appointed by the Committee of Ten. The purpose of the Conference of English was to examine the curriculum of secondary schools (Hobbs & Berlin, 2001). In the Conference of English's final report from 1894, the group stated that the main purpose of teaching English was "to enable the pupil to understand the expressed thoughts of others and to give expression to thoughts of his own" (Committee of Ten of the National Education Association, 1893, p. 86). Thus, began the instruction of writing composition in American schools.

During the first two decades of the 20th century, the concept of social efficiency had an impact on public schools. Social efficiency meant that schools were to prepare students for future work by teaching them cooperation and conformity (Spring, 2005). Schools were to be places where students undertook studies and courses that would groom them for the workplace (Hobbs & Berlin, 2001). In 1917, the United States Office of Education published a report entitled *Reorganization of English in the Secondary*

Schools (Hosic, 1917). The report argued that courses should emphasize students' personal and social needs over college requirements (Hobbs & Berlin, 2001). Hobbs and Berlin (2001) also stated that as for writing, the report called for a progression in school from creative writing activities in the lower grades, to writing activities that prepared students to be efficient workers in the upper grades.

In the period between the two world wars, the focus of composition in schools turned to creative writing and self-expression. The features of the creative expression movement included viewing composition as an art that could advance cultural values, using expressive writing to improve the mechanical elements of writing, enhancing the enjoyment of literature, and encouraging an enjoyment in writing of all kinds and purposes (Kantor, 1975). Behaviorists and social theorists challenged the enthusiasm for creative writing in schools (Hobbs & Berlin, 2001). In response to these challenges on the method for teaching composition, in 1935, the National Council of the Teachers of English (NCTE) sponsored a report entitled *An Experience Curriculum in English* (Hatfield, 1935). This report, shaped by over 100 contributors, did not set out to provide a single curriculum, but instead asserted that appropriately selected experiences should guide curriculum, and writing should equally include creative, expressive, and social communication experiences (Hobbs & Berlin, 2001). The curriculum was centered on the child and called for providing experiences in everyday writing tasks including letters, recipes, diaries, summaries, reports, and stories (Yancey, 2009). The most controversial recommendation of the report was that separate, formal grammar instruction be replaced by the teaching of grammar as part of writing composition (Hobbs & Berlin, 2001).

After World War II and until the 1960s, the focus of American education was on preparing students for post-war adjustment and the experiences they would encounter outside the classroom (Kantor, 1975). Writing in schools became practical and utilitarian, with the emphasis of education being on home, family, practical arts, health, and fitness (Hobbs & Berlin, 2001).

Alternatively, college composition courses were focusing on three themes: communications, literature, and linguistics (Hobbs & Berlin, 2001). The communications courses presented conservative and democratic ideals that were recently challenged during the war through a combination of writing, reading, speaking, and listening activities (Berlin, 1987). The second theme, insisted upon by college professors, was that the most effective method of teaching composition was through reading and writing about literature, which provided students with rich subject matter to write about (Hobbs & Berlin, 2001). Linguistics was the third theme that prevailed in colleges during this period. Professors asserted that learning about the structure of language would facilitate students in learning the structure of discourse and grammar, inevitably making them better writers (Hobbs & Berlin, 2001).

In the years between the 1960s and 1980s, a new conception of writing emerged called process writing. Process writing called for students to engage firsthand in the process of composition instead of studying another author's process (Hobbs & Berlin, 2001). The students' writing process of invention, drafting, peer review, reflection, revision, rewriting, and publishing became more important than the students' writing product (Yancey, 2009).

This period is also marked by a decline in writing instruction in American schools due to the introduction of nationally normed achievement tests (Koretz, 1988). Reports such as *A Nation at Risk* (Gardner, 1983) held schools accountable for the achievement of students. In order to improve test scores, teachers taught to the test and since multiple-choice tests did not require writing ability, writing was often not taught at all (Hobbs & Berlin, 2001). When the failure to teach writing began receiving national attention with articles such as "Why Johnny Can't Write" (Sheils, 1975), educators took the initiative to re-introduce the composition process to students. The National Writing Project (NWP) was one of the initiatives. The NWP, organized in 1973, provides training for teachers, by teachers to improve the writing in schools (Hobbs & Berlin, 2001). Another initiative was the teacher-as-researcher phenomenon that encouraged teachers to develop learning strategies that best suited the needs of their unique students, spearheaded by researchers including Garth Boomer, Donald Graves, Lucy Calkins, and Nancy Atwell (Hobbs & Berlin, 2001). The third initiative was the whole-language approach that focused on the integration of reading, writing, speaking, and listening activities with a social learning environment (Hobbs & Berlin, 2001). The whole-language approach was popular in many countries, but due to the fact that it did not produce measurable results, it was not supported long-term as a mainstream approach to teaching reading and writing (Pearson, 2004).

Writing instruction from the end of the 20th century to today has been affected by standardized testing, the growing diversity of the student population, and the prevalence of digital technology both in and out of the classroom (Yancey, 2009). More recently and continuing into the future, the Common Core State Standards will impact writing

instructional practices, the genres of writing being taught, and the assessment of writing (Sloan, 2010).

Theoretical Perspective

The theory based on the problem of poor use of conventions in writing is grounded in the theory of cognitive grammar. Cognitive grammar was originally developed by Ronald W. Langacker in 1987 and was in direct opposition to Noam Chomsky's theory of transformational grammar that dominated the field during the first half of the 20th century. The theory of cognitive grammar indicates that grammar is meaningful and "allows us to construct and symbolize the more elaborate meanings of complex expressions" (Langacker, 2008, para. 2). This position contradicts the central principle of Chomsky's theory, which states that the concepts that aid language acquisition are inborn (Harper, 2003). Cognitive grammar is based on the assumption that the grammar of language reflects the user's experiences, interacts with cognitive faculties, like memory, and provides speakers and writers with a variety of ways to present their views structurally (Radden & Dirven, 2007). The theory also deals with how words and phrases can be manipulated in order to express ideas more clearly; (i.e., verbal and written form) (Langacker, 1987).

Langacker's theories are based on two essential elements: cognitive processing and symbolism of grammatical structures. Langacker stated that the study of language and cognitive processes are inseparable (Harper, 2003). In order to understand language, the importance of the relations between concepts is necessary. The cognitive grammar theory proposes there is a relationship between a concept and its domain. Langacker (1990) defined a domain as "any sort of conceptualization: a perceptual experience, a

concept, a conceptual experience, an elaborative knowledge system, etc." (Langacker, 1990, para. 3). There is a definitive relationship between a concept and its domain. For example, *leg* is a domain for *knee*. To be able to conceptualize a knee, knowledge of the physiology of the leg is required (Harper, 2003). Salience, making one element more prominent than the other, also supports the relationship between language acquisition and cognitive processes. Langacker (1990) believed the syntax of language is not isolated from cognitive processes but instead is used to make one thing more important in a statement than another.

The second essential element of cognitive grammar is the symbolism of grammatical structures. Langacker proposed that an individual's internalized grammar can be broken down into three basic "units": semantic, phonological, and symbolic (Harper, 2003). Langacker's (1987) "units" are considered the building blocks of meaning and there are no limits to the amount or the complexity of units that an individual may form. The units are symbolic resources that Langacker (1990) said an individual uses to evaluate and generate meaning.

The underlying principle of Langacker's theory, creating meaning from experience, is consistent with constructivism. Constructivism theory also equates learning with creating meaning from experiences and suggests that individuals create their own understanding based on prior knowledge and experiences mixed with the interaction of new ideas (Richardson, 1997). Students are not just vessels to be filled with information, but are active participants in making, understanding, and organizing meaning within specific learning contexts (Higgins, Hartley, & Skelton, 2002).

Constructivism is rooted in the works of Piaget, Bruner, Dewey, Vygotsky, and Goodman (Harris & Graham, 1994; Perkins, 1991). Constructivists believe that learning occurs when meaning is created from experience (Bednar, Cunningham, Duffy, & Perry, 1995) and when an individual's mind filters input from the outside world to create its own reality (Jonassen, 1991). An individual's mind is believed to be the primary source of meaning based on its experiences with the environment and interpretation of those experiences (Ertmer & Newby, 1993). Individuals do not acquire or transfer knowledge from the world, but rather they create and build it based on experiences and interactions. In order to understand learning, the experience in which it occurred must be understood as well (Bednar et al., 1995).

Constructivists subscribe to the philosophy that the interaction between the learner and environmental factors influence and create learning (Ertmer & Newby, 1993). For this reason, Ertmer and Newby (1993) stated that it is crucial that learning take place in realistic settings and that the chosen instructional methods and tasks be relevant to the students' past and present experiences.

Memory plays an important role in constructivist theory. Prior knowledge and experiences are the springboards for new learning (Harris & Graham, 1994). With each new experience and exposure to a situation or concept, an individual's perception will continue to grow and evolve. Memory is cumulative and is built upon with each new experience (Ertmer & Newby, 1993). Constructivists emphasize that instead of simply retrieving a single piece of information stored in the mind, learners use that information in flexible ways to create new and diverse information and memories (Spiro, Feltovich, Jacobson, & Coulson, 1991). Brown, Collins, and Duguid (1989) stated that in order for

learning to be successful and creative, new cognitive tools and memories must include practice in the context of the learner's prior experiences.

Ertmer and Newby (1993) highlighted several learning strategies and applications that are utilized by constructivists when designing instructional tasks. The first and most crucial one is situating tasks in real world contexts so subsequent learning can be more easily applied. The second is the use of cognitive apprenticeships. This strategy of modeling, coaching, and allowing the learner to use actively what is learned, leads to expert performance. The third strategy is presentation of multiple perspectives. Cooperative grouping and collaborations help learners develop and share alternative and varied views. The fourth strategy used by constructivists is social negotiation. Active discussions, debates, and evidence giving activities help anchor learning and make meaningful connections for the learner. Presenting information in a variety of ways is the fifth strategy employed by constructivists. Presenting information at varied times, rearranged for different purposes, and from various perspectives, also helps solidify and anchor learning. The sixth and final strategy Etmer and Newby (1993) highlighted is the utilization of problem-solving techniques that allow the learner to transfer knowledge and skills. Presenting new problems and situations that are different from initial learning conditions allows learners to go beyond simple recall tasks and focus on application and synthesis.

The writing workshop is based on these same constructivist principles. Students are encouraged to become authentic writers by applying their own experiences to their writing instead of following a scripted format. Using mini-lessons, guided practice, independent practice, and writing conferences, the writing workshop model leads the

students through the writing process in a pattern that leads to clarity (Broz, 2001). The constructivist position promotes authentic tasks that are rooted in a meaningful context (Ertmer & Newby, 1993). The writing workshop provides students with authentic writing opportunities that are based on meaningful and personal experiences (Calkins, 1994).

Importance of Writing

"Writing well is not just an option for young people – it is a necessity" (Graham & Perin, 2007b, p. 3). Writing proficiently is a skill needed throughout life from writing in school, to job applications, to social networking. It is a predictor of academic success and essential for communicating in a democratic and global economy (Graham & Perin, 2007b; Reeves, 2002). Many employers in the Unites States are dissatisfied with the deficiencies in their employees' writing skills. These deficiencies transfer into both tangible and intangible costs (Quible & Griffin, 2007). Quible and Griffin (2007) maintained the skill of competent writing was one of the most important qualifications an employee needed to possess. Students must learn be able to present ideas in writing in a clear and concise manner in order to be successful in later life.

Adolescents who do not learn to write well are at a disadvantage in many areas. In school, weaker writers are unable to support their learning in writing and often earn lower grades (Graham & Perin, 2007a). Graham and Perin (2007a) held that these students had a reduced chance of attending college and later securing promotions at their places of employment as adults.

Reeves (2002) suggested that writing improves and builds the capacity for students to reason and think. The National Council of the Teachers of English (2008) stated that writing is a tool for thinking. It enables students to plan, evaluate, revise, and

make judgment calls while tapping into the power of words (Beesley, 2009). Writing helps students become better readers, thinkers, and overall communicators (Smithson, 2008).

Peha (2003b) asserted that writing well helped students express themselves with confidence, think clearly, and gain power over their future as they entered adult life. Also writing acts as a tool for extending and deepening knowledge across subject areas (Keys, 2000). Proficient writers are able to "effectively present an idea, argue a point, analyze an issue, clarify the confusing and evoke the intangible" (Barlow, 2003, p. 57).

Writing Workshop

Writing workshop in an instructional technique born from the movement that thought of writing as a process (Smithson, 2008). Several books by Donald Graves, Lucy Calkins, and Nancy Atwell describing the research and reflections on the teaching of writing form the basis for the writing workshop instructional approach (Fisher, 1995).

Writing workshop is a way of organizing a writing class in a meaningful way that is designed to emphasize the act of writing itself (Calkins, 1994; Graves, 1983; Peha, 2003a). The writing workshop is student-centered and immerses students in writing for real purposes based on their interests and experiences (Singagliese, 2012). Students are deeply involved in the writing process and take ownership of their writing pieces during all stages of the process (Smithson, 2008). During the writing workshop, teachers foster the belief in students that they are real writers writing for real audiences and purposes (Graves, 2003).

Each writing workshop lasts approximately 45 minutes and contains the components of mini-lesson (10-15 minutes), writing and conferring time (30-35 minutes),

and share sessions (10-15 minutes) (Calkins, 1994). The mini-lesson is the component of writing workshop where the direct instruction of a specific skill or strategy is done followed by shared and interactive writing (Calkins, 1994). Immediately following the mini-lesson, students have time to apply the mini-lesson's strategy to their own writing during independent writing time. The teacher conferences with students during the independent writing component of the writing workshop. Teachers may conference with a student to reinforce the mini-lesson or work on writing conventions. The writing workshop structure is predictable and consistent allowing students to develop their own plans, rhythms, and strategies for writing (Calkins, 1994).

Research on writing workshop. Several studies set out to test the effect of various aspects of the writing workshop model in teaching students to create meaningful compositions. Many concluded that the writing workshop was an effective instructional model. A study conducted by Daly and Sharko (2010) focused specifically on the use of children's literature or mentor texts, in the writing workshop. Daly and Sharko examined the effect of children's literature on the motivation of students to write. The researchers also investigated the effect of sharing writing with peers on the motivation to write as well. Using children's literature or mentor texts, provided students with a model and guide for quality writing. A crucial component of the writing workshop was the time set aside at the end of the workshop for students to share their writing with each other. Daly and Sharko concluded that exposing students to children's literature and providing them with opportunities to share their writing during the writing workshop, increased their motivation to write. The students also produced longer pieces, although the quality of the writing pieces was not discussed.

Another study that presented the positive effects of the writing workshop was by Jasmine and Weiner (2007). Jasmine and Weiner conducted a study to explore the extent to which the writing processes presented in the writing workshop enabled first-grade students to become confident and independent writers. Jasmine and Weiner concluded that the writing workshop model was an effective instructional method to support first graders in learning the writing process. At the end of the study, the students were working independently, participating in collaborative student conferences, and sharing their published stories with peers.

A study that supported the purpose of this research study was the one conducted by Jane Price (1998). Price compared traditional grammar instruction and the writing workshop approach in a three-week study. The purpose of Price's study was to determine which method of instruction, traditional grammar instruction or the writing workshop approach, resulted in higher scores in language ability on both standardized grammar tests and writing projects. Fifth and sixth-grade participants were randomly divided into two groups and administered a pretest. During the implementation period, the control group received grammar instruction using traditional textbook instruction and the experiment group received grammar instruction using the writing workshop approach. At the end of the study, both groups were administered a posttest. Based on the statistical analysis of the pretest and posttest data, Price stated that grammar skills were learned as well by both groups but the group that received the writing workshop approach made significant gains in the application of grammar skills in their writing. Price concluded that students who were taught language skills with a writing workshop approach scored at

higher levels of language ability than students who were taught using a traditional grammar approach.

The teacher is considered a key factor in the successful implementation of the writing workshop. Two research studies, one conducted by James Singagliese (2012) and the other conducted by Troia, Shin-ju, Cohen, and Monroe (2011) analyzed the effectiveness of the writing workshop but focused on the role of the teacher. Singagliese studied if the implementation of the writing workshop affected student writing achievement, students' and teachers' attitudes towards writing, and writing instructional practices. Singagliese concluded that in regards to students achievement in writing, the students' ability to convey a message, include a variety of word choices, apply conventional strategies and enhanced writing voice, create structure, generate ideas, and incorporate sentence fluency had all improved due to the implementation of writing workshop. Singagliese also found that both the students' and the teachers' attitude towards writing and the writing workshop was positive after implementation. The implementation of writing workshop also had an effect on the writing instructional practices teachers used. Singagliese concluded that because of the implementation, teachers were displaying behaviors, employing instructional practices, such as modeling, and incorporating the social components that were consistent with the writing workshop philosophy. A majority of the teacher's were also employing the writing workshop strategies across the curriculum areas.

The second study that focused on the role of the teacher conducted by Troia et al. (2011) found that the teachers in the study employed all of the critical components of the writing workshop, and those components were evident during the classroom

observations. Troia et al. also reported that teachers held a balanced view of writing instruction that endorsed both explicit and incidental instruction methods. Finally, Troia et al. concluded that teachers' beliefs and knowledge about writing positively influenced their teaching practices by giving them the confidence to utilize more key elements of the writing workshop in their daily instruction.

Two studies (Harris, Graham, & Mason, 2006; Tracy, Reid, & Graham, 2009) examined a specific strategy within the writing workshop method. Self-regulated strategy development (SRSD) is a method where students are explicitly taught writing strategies that focus on planning, drafting, revising, and editing (Tracy, Reid, & Graham, 2009). The first study that addressed SRSD in the writers' workshop added the element of student motivation. Harris, Graham, and Mason (2006) conducted a study to examine the effectiveness of SRSD in improving the performance of struggling writers and to decide whether social support would enhance those same students' writing performance. Data was collected through writing samples, pretests and posttests, and teacher surveys on students' motivation. The researchers concluded that both SRSD instruction and peer support had positive impacts on the writing performance of struggling writers when compared to the performance of struggling writers who did not receive SRSD or peer support.

Tracy, Reid, and Graham (2009) conducted the second study that focused on the SRSD strategy. Their study examined the effect of teaching strategies for planning and drafting stories during the writing workshop on writing in the primary grades compared to the effect of teaching traditional skills on writing in the primary grades. The results revealed that students' writing improved by directly teaching planning and drafting

strategies during the writing workshop. The control groups' writing samples were more organized and well written compared to the comparison groups' writing samples.

Conversely, Bernard Bragen's (2007) and Marla Smithson's (2008) studies both concluded that the writing workshop had no effect on student writing. The purpose of Bragen's study was to compare the effects of using the writing workshop method and traditional process writing on writing achievement. At the end of the implementation period, state test scores were analyzed and Bragen concluded that there was no significant difference between the writing achievement of students taught using writers' workshop and those students taught using a traditional writing method.

Marla Smithson (2008) also researched the academic effects of the writing workshop. Smithson's research intended to determine if there was a relationship between the implementation of writing workshop and subsequent improvement of writing achievement on a state writing assessment. Based on the test results, Smithson concluded that there was no difference in student writing achievement on the state writing test as a result of implementing the writing workshop and that continued use of the curriculum did not contribute to student achievement. Smithson noted that a major drawback of the study was the resistance of teachers to fully implement the writing workshop and that time, proper training, and instructional support needed to be improved in order for the curriculum to be fully implemented by teachers.

Research has shown that the writing workshop is an effective instructional technique that helps students create meaningful compositions. Writing instruction is taught through the writing workshop model in the second grade at the research site. Instruction is divided into eight units of study. The units of study focus on a specific

genres of writing. The teaching points, or objectives, of the mini-lessons in each unit of study concentrate on developing the writing skills necessary to write a piece successfully in that genre. Writing conventions instruction is addressed during individual writing conferences in the context of a student's own writing.

The Mini-Lesson and Direct Conventions Instruction

The mini-lesson is the direct instruction component of the writing workshop. It is a short, teacher-led discussion of a single writing strategy or concept (Peha, 2003a). The mini-lesson begins with the students gathering at a meeting place and the teacher making a connection of how the lesson's teaching point will fit into the students' lives as writers (Singagliese, 2012). The teacher demonstrates the teaching point through modeling, with mentor texts, or with student writing samples (Calkins, 1994). The students then participate in an active engagement where they have the opportunity to practice the teaching point before having to apply it to their own writing (Singagliese, 2012). The mini-lesson follows the gradual release of responsibility model by beginning with a high degree of teacher support and ending with a high degree of student independence (Barrows, 2010).

Writing conventions are tools that writers use to help make their writing understandable and communicate meaning (Graves, 1994). Numerous convention errors often make an author's intended meaning and message confusing or difficult to understand (Anderson, 2005; Angelillo, 2002). Writing conventions must be explicitly taught in the elementary grades (Troia, 2007). An effective way of delivering the direct instruction of writing conventions is via the mini-lesson (Peha, 2003a). Teachers can use the mini-lesson as an opportunity to enrich and teach specific writing conventions

(Weaver, Bush, Anderson, & Bills, 2006). The mini-lesson also meets Troia's (2007) curricular considerations for teaching writing conventions. In order to instruct students effectively in writing conventions, teachers must meet certain conditions. They must establish routines, provide instruction for 15 minutes per day, model proper use of conventions, provide many opportunities for practice, and use activities that promote independence (Troia, 2007). The writing workshop mini-lesson format allows for all of these conditions and considerations to be met. This supported the use of writing conventions mini-lessons as the direct instruction component for this research study.

Grammar and Conventions

There are countless questions that arise when the topic of grammar and conventions instruction is brought up. There are two schools of thought concerning the method of grammar and conventions instruction. One school of thought contends grammar should be taught in isolation from writing and the other school of thought maintains grammar should be taught in the context of writing (Weaver, McNally, & Moerman, 2001). Teaching in context is when a teacher focuses on writing, and in the process, guides students in using grammar and writing conventions to make their writing more interesting, understandable, and appreciated by their audience (Weaver, 2008).

The results of a meta-analysis of writing instruction for students in the elementary grades conducted by Graham, McKeown, Kiuhara, and Harris (2012) indicated isolated grammar instruction did not statistically influence writing quality. Instead, writing interventions that involve explicit instruction and procedures for scaffolding and supporting students' writing produced statistically significant effects and improved student writing (Graham, McKeown, Kiehara, & Harris, 2012). Based on the results of

two international systematic research reviews, Andrews et al. (2006) concurred with these findings. The results of the review showed that there was little evidence to support that the teaching of formal grammar was effective and that using the sentence-combining strategy had a more positive effect. Sentence-combining is defined as "a range of practical techniques for moving from existing sentences and elements of sentences to compound and complex sentences" (Andrews et al., 2006, p. 48).

Blaauw-Hara (2006) asserted that traditional grammar instruction that included lectures on grammatical concepts, diagramming sentences, and mastery quizzes does not work and even hindered a student's writing abilities. In an attempt to translate the research on grammar instruction into classroom practice, Blaauw-Hara provided several specific strategies for effective grammar instruction. The strategies included addressing grammar rhetorically, teaching writing as a process, focusing on teacher-student dialogue and questioning, teaching grammar in the context of the student's own writing, engaging in critical reading of one's own writing, providing quality writing models, and holding students accountable for errors in their writing (Blaauw-Hara, 2006).

The study by Feng and Powers (2005) added to the growing research that supports teaching grammar in the context of writing. Their study intended to measure the effectiveness of a teaching model that was based on utilizing students' errors in writing to teach grammar rules and concepts and whether or not it had positive short-term and long-term effects on the students' writing. The participants of this study were a group of fifth-grade students in a public elementary school. Over the course of a school year, writing samples were collected and analyzed for grammar errors. Based on those errors, mini-lessons were taught that targeted those errors and then editing lessons to reinforce the

concepts followed. Several more writing samples throughout the year were collected and analyzed to determine the long-term effect that the targeted mini-lessons had on student writing. The study concluded that the accuracy of student writing was improved through error-based instruction both short-term and long-term and was an effective approach to teaching grammar in the context of writing.

Teacher perceptions and beliefs play a pivotal role in the effectiveness of grammar instruction. The study by Phipps and Borg (2009) addressed this topic. Their study examined the divergences between what language teachers said and actually did in teaching grammar. The differences in teachers' stated beliefs and what they actually did instructionally concerning grammar in the classroom was looked upon as a negative. The objective of the study was to explore the reasons for these differences and use them as a platform for both teacher professional development and further research. The participants of the study were three volunteer veteran language teachers. The data was collected over 18 months using interviews and observations. The findings of the study suggested that the beliefs of the participants did not always align with their teaching practices. Although the teachers stated their belief was that grammar should be presented in context, due to assessment concerns, they often taught grammar in isolation. Phipps and Borg concluded the study by suggesting that teacher professional development should encourage teachers to examine the ways their beliefs differ from their practices and review the reasons for those differences. Phipps and Borg believed that this self-evaluation would allow educators to discover why their practices and beliefs often do not align and would be a first step in aligning them and making their grammar instruction more effective.

The most popular teaching trend concerning grammar and writing conventions instruction being advocated recently is embedding their instruction into the writing workshop (Weaver, 1996, 1998, 2008). Noden (1999) stated the most effective and efficient way to teach grammar and conventions was through students' own writing. Several studies dealt with this trend. One such study was done by Brantley in 2008. This study determined the effects of a systematic approach to teaching the use of grammar skills in the context of a students' own writing in the writing workshop. The problem of low language arts test scores prompted Brantley's (2008) study. The participants were a group of 15 second graders. The students were given a pretest of grammar skills and then divided into flexible groups based on their grammar needs. Grammar mini-lessons were then taught during writing workshop, and small groups were pulled to reinforce specific grammar skills. This method of instruction continued throughout the four-month intervention period and ended with a posttest. Brantley concluded that a significant improvement was achieved in students' ability to use learned grammar skills. Due to the small sample size used for the study, Brantley recommended that multiple classes be used for further research on this topic.

Nancy Patterson (2001) stated that teachers need to include grammar lessons in the context of reading, writing, listening, and speaking. Teachers need to move away from the traditional view of grammar as a set of rules to be followed and focus on teaching students the importance of grammar and how to apply it in the context of their own writing errors and experiences. Patterson's statements about the teaching of grammar were the result of her summary and conclusions of several seminal research studies that offer directions on how grammar should and should not be taught (Braddock,

Lloyd-Jones, & Schoer, 1963; Elley, Barham, Lamb, & Wyllie, 1976; Hillocks, 1986; Weaver, 1996). Based on these studies, Patterson concluded that the traditional study of grammar had little impact on student learning and that when students learned and understood grammar in the context of larger lessons, they were able to internalize and apply strong and proper communication skills.

Another study that researched this popular teaching trend investigated whether teaching grammar and conventions in the context of writing improved student outcomes in writing. This study by Myhill, Jones, Lines, and Watson (2011) used a mixed method approach, and the collection of data was divided into three categories. The first category was the baseline data collected before the intervention. The second category was the impact data comprising of the pretests and posttests. The third category was the qualitative data consisting of observations, interviews, and writing samples. The participants were 744 students from 31 schools in middle and southern England and were divided into a comparison group and an intervention group. Both groups had the same learning objectives, length of study, and assessments. The intervention group's lessons were focused to introduce grammar into the writing process during the writers' workshop for each writing genre taught. The comparison group's lessons just taught the basic skills of the writing genre. The results of the study indicated that both the comparison group and the intervention group showed improvement, but the intervention group improved significantly more. Myhill et al. concluded that there was sufficient evidence to support the idea that teaching grammar in the context of the writers' workshop had a positive impact on student writing performance.

Rei Noguchi (1991) recommended that teachers integrate grammar instruction with writing instruction by merging what students already know with the most important grammar terms and most frequently made grammar and usage errors. Patricia McAlexander (2000) built upon Noguchi's recommendations with her Grammar Checker Project. McAlexander designed a project that provided college level students with instruction on basic grammar and usage rules. Students were then asked to apply those rules to their own writing and run their writing through a word processing program's grammar checker. The grammar checker flagged any errors and suggested corrections for grammatical and mechanical problems. After reviewing the grammar checker's suggestions, the students then analyzed and corrected their errors. After participating in the Grammar Checker Project, students often did not need to request the computer's advice and were able to recognize and correct grammatical errors themselves. McAlexander concluded that the project increased students' understanding of grammar in general by linking grammar instruction to the writing process.

Hoffman and Topping (2008) explained that many critics claimed grammar instruction took time away from reading and writing and was taught in ways that are unappealing to students, such as skill-and-drill exercises. Through their research, Topping & Hoffman (2006) created lesson ideas that supported active learning of grammar. Hoffman and Topping stated that grammar lessons and activities should be supportive of the reading and writing process and should be built upon brain research, Gardner's (1993) work on multiple intelligences, and Gregorc's (1985) research on learning styles.

The final study that dealt with this teaching trend came up with different results than the other studies. In this study, Low, Robinson, and Zhu (2006) examined the effect of teaching formal sentence grammar and sentence-combining in the writing workshop on five-16-year-olds' writing development. The study used interviews, observations, writing samples, and the results of research reviews to formulate the results of their study. Low et al. stated that there was criticism of their study due to the reliance on information from research reviews. The results of the study found that the teaching of formal sentence grammar in the writers' workshop had no influence on the quality or accuracy of five-16-year-olds' writing. Conversely, the teaching of sentence combing during the writing workshop appeared to have a positive effect on the accuracy of the same group's writing.

Writing Assessment

Carl Anderson (2005) described writing assessment as the work an educator must do in order to identify a student's strengths and needs and to decide what should be taught next. It should be the driving force behind instruction. Writing assessment can be used for a variety of purposes: to inform instruction, to determine placement, to assign grades, to judge proficiency or to provide student feedback. Writing assessments can be summative or formative. Summative assessment measures the success of instruction, and its goal is to judge how well a student has accomplished a writing task (Clark, 2012). Formative assessment shapes a student's writing while they are still in the writing process, and its goal is to help students improve their writing ability, skills, and products (Clark, 2012). Types of writing assessments include standardized tests, portfolios, rubrics, conferences, classroom observations, and self-assessments (Anderson, 2000;

Calkins, 2003). The main goal of any assessment is to inform and drive future instruction (International Reading Association & National Council of Teachers of English, 2009).

Standardized tests. Two types of standardized writing assessments help teachers determine and evaluate the strengths and areas of improvements for student writers: direct and indirect assessments. Direct writing assessments require students to generate writing based on a prompt or set of directions (Barone & Taylor, 2007). Direct assessments are often timed, and the results are evaluated according to a set of predetermined performance criteria (Stiggins, 1982). Indirect assessments evaluate a student's knowledge of writing through selected-response or multiple-choice items and usually involve the identification rather than the use of writing elements (Barone & Taylor, 2007). Students are required to recognize errors and best examples as opposed to actively generating a writing sample (O'Neill, Murphy, Hout, & Williamson, 2005). Many standardized tests utilize a combination of both direct and indirect writing assessments (Singagliese, 2012).

Children's Progress Academic Assessment. The Children's Progress Academic Assessment (CPAA) is the indirect standardized writing assessment currently being used in second grade at the research site. The CPAA is a computer-adaptive assessment of early literacy and mathematics skills for students in pre-K through third grade. In early literacy, the CPAA assesses listening skills, phonemic awareness, phonics and writing skills, and reading and reading mechanics (Camacho, 2010). In mathematics, the CPAA assesses measurement, numeracy, operations, and patterns and functions (Camacho, 2010). Scores on the CPAA are presented as a four-point numerical expectation score in order to help teachers identify how students are performing based on end of the year

expectations. The numeric values for the grade expectations are 1 (Below Expectation), 2 (Approaching Expectation), 3 (At Expectation), and 4 (Above Expectation) (Camacho, 2010).

The scores for the CPAA Phonics/Writing subtest were used to determine writing mechanics mastery for the purpose of the research study. The Phonics/Writing subtest assessed the students' achievement in spelling, paragraph completion, and editing of punctuation, capitalization, contractions, syntax, verb tense, possessive nouns, plurals, and pronouns (Camacho, 2010).

Portfolios. Writing portfolios are a collection of student writing samples gathered over time that illustrate authentic growth and achievement throughout the writing process (O'Neill et al., 2005). The contents of portfolios vary and may contain samples from different genres, from various stages of the writing process, student and teacher chosen pieces, or final, edited pieces (Camp, 1993). Writing portfolios document a student's performance and achievement and are utilized by teachers to inform instruction (Barone & Taylor, 2007). Barone and Taylor (2007) stated that portfolios also provided an opportunity for students to participate in self-assessment and collaborative assessment experiences.

Portfolio contents allow teachers to assess student writing and provide evidence of the effectiveness or ineffectiveness of instruction (Condon, 2012). Condon (2012) contended portfolio-based writing assessments yielded data that drove future instruction. Portfolio contents provide information for program and lesson design, archive curriculum, provide models for future instruction, and allow teachers to differentiate instruction (Condon, 2012).

Two types of writing portfolios can be used for assessment purposes. A growth portfolio demonstrates a student's writing development over a period of time and contains a baseline-writing piece along with various writing samples from throughout a school year (Fountas & Pinnell, 2001). Growth portfolios may be used for formative and summative assessment. A showcase portfolio contains samples of a student's best writing pieces and is used for summative assessment (Fountas & Pinnell, 2001).

Rubrics. A writing rubric is described as a type of analytic performance assessment that is used as a scoring or instructional guide (Barone & Taylor, 2007). Rubrics are often presented in chart form and developed in connection with a writing assignment or writing performance. Rubrics list the criteria for a writing assignment and describe graduated performance levels and quality from excellent to poor (Saddler & Andrade, 2004). Rubrics can be used for both assessment and instruction. Assessment rubrics help define quality and provide students with more informative feedback about the strengths and weaknesses of their writing (Andrade, 1997). Instructional rubrics assist students in planning and self-monitoring their own writing (Harris, Graham, Mason, & Saddler, 2002). Instructional rubrics promote thinking by helping students locate and fix problems in their own writing (Andrade, 1997). Instructional rubrics can also be used as assessment rubrics when the writing piece is complete. Andrade (1997) stated that rubrics have become popular in the classroom because rubrics can be easily adjusted to reflect the instructional objectives of a writing assignment

Conferences. Carl Anderson (2010) defined a writing conference as a one-on-one conversation between a student and teacher to help the student become a better writer. Conferences have a predictable structure. Writing conferences provide opportunities for a

teacher to provide individualized instruction, monitor writing progress, and plan for future instruction. Vygotsky's (1978) zone of proximal development (ZPD) is the difference between what a student can do with assistance and what they can do independently. Vygotsky contended that the most effective instruction was aimed not at a student's level of independent learning but instead was aimed within their ZPD. During writing conferences, teachers provide the student with individual guidance that is within their ZPD (Dorn & Soffos, 2001). During the first part of a writing conference, the teacher informally assesses the student's writing and decides upon a teaching point based on what strengths or weaknesses they identify in the writing piece (Anderson, 2005). Anderson (2005) explained during the second part of a writing conference, the teacher gave critical feedback, reinforced the teaching point, and linked the teaching point to the student's own writing. Successful writing conferences combine thoughtful questioning with strategic instruction and build strategies students will apply to their current writing, as well as all future writing (Davis & Hill, 2003).

Classroom observations. Classroom observations are informal teacher observations that yield information that can be used to drive instruction (Anderson, 2000; Calkins, 2003). A teacher records observations about a student's writing activities, patterns, strengths, and weaknesses in order to assess and assist the students in improving their writing (Anderson, 2005). The information from these observations can be used to plan instructional strategy groups and individual student conferences. Classroom observations provide teachers with anecdotal information about how a student works and applies strategies to their writing, which is something that cannot be assessed from a finished writing piece.

Self-assessments. Self-assessment is the practice of looking reflectively at and evaluating one's own writing in order to improve its quality based on a predetermined set of criteria (Nielsen, 2014). Self-assessment methods and practices present significant ways to increase student writing achievement through reflection and meta-cognition and foster growth in student writing ability and transfer to future writing tasks (Nielsen, 2014).

There are three popular classroom practices of self-assessment in writing. The first is self-assessment in response to specific written prompts (Nielsen, 2014). Students evaluate their own writing based on specific attributes and qualities of good writing. Rubrics and revising checklists are often used during this self-assessment practice. The second self-assessment practice is open-ended written reflection (Nielsen, 2014). Students evaluate their writing holistically and express their own evaluation in the form of a written analysis. Instead of reflecting on specific components of writing, students focus on the writing's overall success at conveying the intended message. The third self-assessment practice is oral presentation of writing to a peer or group of peers (Nielsen, 2014). Students share their writing in front of an audience with the goal of hearing it the way the listener may hear it in order to check for clarity, meaningfulness, and precision of their writing.

Summary

Writing is a powerful tool for students to use to express their thoughts, feelings, experiences, and creativity. It is crucial for students to be able to communicate in writing using proper grammar and conventions. The problem of poor use of conventions in student writing has prompted several researchers (Bragen, 2007; Daly & Sharko, 2010;

Harris, Graham, & Mason, 2006; Jasmine & Weiner, 2007; Price, 1998; Singagliese, 2012; Smithson, 2008; Tracy, Reid, & Graham, 2009; Troia, Shin-ju, Cohen, & Monroe, 2011) to study the writing instructional methods being utilized by teachers. Based on the research articles contained in this literature review, teaching writing and writing skills through the use of the writing workshop method has been shown to be effective and have a positive impact on student writing. The writing workshop provides opportunities for students to practice meaningful writing. Additionally, grammar and conventions taught in the context of student writing has been found to be effective as well. The purpose of this quantitative research study was to determine the effect of direct writing conventions instruction on the CPAA scores of independent school second graders. The results of the review set the premise for this purpose statement and subsequent research questions.

Research Questions

In order to address the identified problem for this research study, the following research questions were asked:

Research Question 1. How do the CPAA Phonics/Writing subtest scores of second grade students who received direct writing conventions instruction compare to the CPAA Phonics/Writing subtest scores of second grade students who did not receive direct writing conventions instruction at an independent school in southeastern Florida?

Research Question 2. Is there a statistically significant difference between the mean pretest to posttest change scores of second graders who received direct instruction in writing conventions and the mean pretest to posttest change scores of second graders who did not receive direct instruction in writing conventions at an independent school in southeast Florida?

Null hypothesis. There will be no statistically significant difference between the mean pretest to posttest change scores of second graders who received direct instruction in writing conventions and the mean pretest to posttest change scores of second graders who did not receive direct instruction in writing conventions at an independent school in southeast Florida.

Chapter 3: Methodology

Introduction

The purpose of this research study was to determine the effect of a direct writing conventions instructional strategy on the CPAA scores of second graders attending an independent school in southeast Florida. This research study utilized a nonexperimental quantitative method. Aliaga and Gunderson defined quantitative research as "explaining phenomena by collecting numerical data that are analyzed using mathematically based methods" (as cited in Muijs, 2011, p. 1). One type of control in nonexperimental research that can be utilized is through different types of statistical procedures (Edmonds & Kennedy, 2013).

Participants

The participants for this study were selected from an independent, college preparatory, coed, day school in southeast Florida. The total enrollment of the school for the school year 2012-2013 was 1,096 students. The school is divided into three divisions: an Upper School, a Middle School, and a Lower School. The Upper School is located on a separate campus from the Middle and Lower Schools. The total enrollment for the Lower School during the 2012-2013 school year was 422 students. The demographics for the Lower School during the 2012-2013 school year were 367 White (87%), 7 Multiracial (7%), 10 Hispanic (2.4%), 10 Asian (2.4%), 4 African American (1%), and 1 Native American (.2%). The population for this study was second graders attending the research site during the 2011-2012 and 2012-2013 school years. The sample was all second graders at the research site for those two school years that had a pretest and a posttest score for the Phonics/Writing subtest of the

CPAA.

The demographics for the sample were 74 White (90.2%), 3 Asian (3.7%), 3 Hispanic (3.7%), and 2 Multiracial (2.4%). There were 50 males (61%) and 32 females (39%) in the sample. The method for selecting the sample was convenience sampling (Creswell, 2012; Gall, Gall, & Borg, 2006). The researcher chose convenience sampling because the participants were located and available at the school where the researcher is employed (Huck, 2012). Therefore, the researcher had access to the precollected archival data needed to conduct the study (Gall et al., 2006).

Instrument

The researcher analyzed existing archived pretest and posttest scores from the Phonics/Writing subtest of the Children's Progress Academic Assessment (CPAA) for the 2011-2012 and 2012-2013 school years to determine the impact of direct writing conventions instruction. The CPAA was conceived and designed at Columbia University by Professor Eugene Galanter, PhD. The CPAA is a computer-adaptive, formative assessment of early literacy and mathematics for students in grades pre-K through three. Described by Camancho (2010), the CPAA tests the sub-concepts of phonemic awareness, phonics and writing, reading and reading mechanics, measurement, numeracy, operations, and patterns and functions. During the administration of the test, the computer automatically adjusts the questions based on the student's performance on previous questions. The CPAA contains unique assessment banks that include questions that cover the same core concepts with increasing difficulty as the year progresses (Camacho, 2010). At the research site, the CPAA is administered annually in September and May. Scores are presented in a numerical grade equivalent average combined with a narrative

summary and in a numerical expectation score. The numerical expectation score is based on a four-point scale that is correlated to a grade expectation. The breakdowns of the numerical expectation are 1 (Below Expectation), 2 (Approaching Expectation), 3 (At Expectation), and 4 (Above Expectation) (Camacho, 2010). The numerical expectation score was used for the data analysis of this study.

Validity. Validity is the development of evidence to demonstrate that a test measures what it is intended to measure (Creswell, 2012). The CPAA's validity was assessed through an analysis of its relationship to other instruments designed to measure similar concepts. In 2006, the CPAA was measured against the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) in Grade 1, against the Terra Nova Achievement Test (TN) in Grade 2, and against the Arizona Instrument to Measure Standards (AIMS) in Grade 3 (Camacho, 2010).

The DIBELS is a fluency assessment that measures phonological awareness, alphabetic principle, vocabulary, accuracy and fluency, and comprehension. Camacho (2010) stated that a correlation of 0.55 was found when the overall results of the DIBELS were examined against the overall results for the literacy section of the CPAA. This correlation established a significant positive relationship between the two measures (Camacho, 2010).

The TN is a series of achievement tests that assess proficiency in reading, language arts, and mathematics. Camacho (2010) stated that a significant correlation of 0.69 was discovered when a comparison of overall performance on the TN mathematics and the CPAA mathematics was completed. A high correlation of 0.49 was observed between the literacy scores of the CPAA and the TN language arts subtest and

additionally, a high correlation of 0.55 was observed between the literacy scores of the CPAA and the TN reading subtest (Camacho, 2010).

The AIMS is a statewide test given to third graders and assess skills in language arts, reading, and mathematics. The results of the CPAA overall, raw scores were compared to the overall percentile scores of the AIMS. A correlation of 0.76 was revealed indicating significant correlations between the AIMS and the literacy and mathematics components of the CPAA (Camacho, 2010).

Reliability. Reliability indicates that an instrument's scores are accurate, consistent, and stable on repeated administrations (Creswell, 2012). A Cronbach's alpha was computed for the CPAA in each grade across the administration periods. The reliability alphas were 0.9, 0.92, 0.92, 0.89, and 0.91 for the Pre-Kindergarten, Kindergarten, Grade 1, Grade 2, and Grade 3 assessments, respectively (Camacho, 2010). In all grades, in both literacy and math, the CPAA demonstrated reliability of .089 or higher (Camacho, 2010).

Procedures

Design. Prior to collecting data, approval from Nova Southeastern University's Institutional Review Board (IRB) and the research site's Head of Lower School was obtained. To guarantee the participants' confidentiality and anonymity were protected, the researcher utilized de-identified data making sure all information that could identify a participant or cause a breach of confidentiality was omitted. Protecting the anonymity of individuals and keeping their identity confidential is an ethical practice that offers privacy to the participants (Creswell, 2012). This study did not require informed consent of the participants because the researcher used the precollected archival data that was collected as

part of the standard assessment procedures each year at the research site. None of the procedures for the study were outside the normal curriculum, classroom, and assessment activities for the school. Previously archived pretest and posttest Phonics/Writing subtest data from the 2011-2012 and 2012-2013 administration of the CPAA was obtained, de-identified, and provided to the researcher by the research site's Test Administration Coordinator.

The research study was non-experimental. Non-experimental research is utilized when the researcher cannot control the independent variables through means of manipulation, inclusion, exclusion, or group assignment because their manifestations have already occurred (Edmonds & Kennedy, 2013). This study employed an ex-post facto pretest-intervention-posttest design with a control group. This design is useful in minimizing threats of internal validity when measuring changes over time (Creswell, 2012). Existing archived pretest and posttest data from 2011-2012 and 2012-2013 school years was analyzed to measure second graders' writing mechanics mastery, as evidenced by their performance on the Writing/Phonics subtest of the CPAA.

Procedures prior to intervention. Throughout the 2011-2012 school year, writing conventions instruction at the research site occurred in the context of a student's writing during the writing conference. Writing conferences were held during the independent writing time of writing workshop for the purpose of individualized instruction. During the student-teacher writing conferences, if a conventions error was observed in a writing piece, the teacher would immediately provide instruction on the proper use of the convention only to that student. If the same convention error occurred in several students' writing pieces, then a small strategy group lesson would be provided to

those students in the context of their writing. There was no direct instruction of writing conventions provided to the whole group. Writing instruction was taught via mini-lessons and divided into eight units of study. The units of study were Launching the Writing Workshop, Personal Narratives, Nonfiction Writing, Letter Writing, Biographies, Nonfiction Writing in Social Studies, Poetry, and Fairy Tales. Writing instruction was allotted a block of 45 minutes, three days a week with units of study mini-lessons being taught each of the three days. The CPAA was administered in September and May as the pretest, posttest measure to assess achievement gains related to the instructional program.

Intervention procedure. During the 2012-2013 school year, the entire second grade was provided with direct instruction of writing conventions through the use of writing workshop mini-lessons. This differed from the 2011-2012 writing instruction that did not include these mini-lessons. One teacher provided all of the writing instruction for the second grade. Based on the skills found on the Second Grade Grammar Checklist and the errors found in the student's writing, the writing teacher wrote convention mini-lessons to address those skills. The mini-lessons were taught during the writing workshop using mentor texts and student writing pieces. Writing instruction was allotted a block of 45 minutes five days a week. The units of study mini-lessons were taught three days a week, as they were in the previous year, and the writing conventions mini-lessons were taught during the additional writing periods. The eight units of study, writing conferences, and strategy groups remained the same as the previous year, as well. The CPAA was administered in September and May as the pretest, posttest measure to assess achievement gains related to the instructional program.

Data analysis for Research Question 1. In order to answer the first research question regarding the comparison of scores of students who received direct instruction compared to scores of students who did not receive direct instruction, the 2011-2012 pretest and posttest CPAA test scores were obtained from archived data. The mean change score for 2011-2012 data was calculated by averaging the numerical expectation scores. This mean served as the control group score. Next, the 2012-2013 pretest and posttest CPAA test scores were obtained from archived data. The mean change score for 2012-2013 data was calculated by averaging the numerical expectation scores. This mean served as the treatment group score. To answer Research Question 1, a comparison of the mean scores for the control group and treatment group was executed.

Data analysis for Research Question 2. The mean change scores found in answering question one were used in determining whether or not there was a statistically significant difference between the mean pretest to posttest change scores of students who received direct instruction and the mean pretest to posttest change scores of students who did not receive direct instruction. In that two separate means were compared for statistical significance, an independent-samples *t*-test was utilized in the analysis of data using the Statistical Package for the Social Sciences (SPSS) software (Green & Salkind, 2012). Ary, Jacobs, and Sorensen (2008) maintained that a *t*-test was the statistical procedure utilized when comparing two means. Before any data for a study are collected, the researcher must select a level of significance (Huck, 2012). An alpha level of .05 was selected for statistical significance. Based on the *t*-test analysis, Research Question 2 was answered, and the researcher failed to reject the Null Hypothesis.

Limitations

In nonexperimental research, the researcher does not attempt to control the conditions. Control is exerted through statistical procedures and, therefore, the concept of internal validity does not apply to nonexperimental research (Edmonds & Kennedy, 2013) and there is little attempt to control for threats to internal validity (Lobmeier, 2010). Issues related to external and construct validity need to be addressed in nonexperimental research.

External validity refers to the ability to generalize results beyond the groups, settings, treatment variable, and measures (Creswell, 2012). One limitation of this research study is that the results will only be able to be generalized with caution to schools with a similar setting or similar population.

Another limitation of this research study relates to construct validity. Construct validity refers to the extent a test measures the construct that it is intended to measure (Creswell, 2012). The instrument that was utilized for this study is the CPAA. The CPAA has had extensive validity and reliability testing which enhanced the construct validity.

Chapter 4: Results

Introduction

Chapter four presents results regarding the impact of a direct writing conventions instructional strategy on second grade writing mechanics mastery. To address the problem of the current research study, two research questions were posed. The first research question examined how the CPAA Phonics/Writing subtest scores of second grade students who received direct writing conventions instruction (treatment group) compared to the CPAA Phonics/Writing subtest scores of second graders who did not receive direct writing conventions instruction (control group) at an independent school in southeast Florida. The second research question investigated if there was a statistically significant difference between the mean pretest to posttest change scores of second graders who received direct instruction in writing conventions (treatment group) and the mean pretest to posttest change scores of second graders who did not receive direct instruction in writing conventions (control group) at an independent school in southeast Florida. The control group consisted of 43 second-grade students (N=43) and the treatment group consisted of 39 second-grade students (N=39). Statistical analyses were utilized to examine the data in order to answer the research questions.

Results for Research Question 1

Research Question 1 asked: How do the CPAA Phonics/Writing subtest scores of second grade students who received direct writing conventions instruction (treatment group) compare to the CPAA Phonics/Writing subtest scores of second grade students who did not receive direct writing conventions instruction (control group) at an independent school in southeastern Florida?

In order to answer the first research question, the mean change score for each student in both the control group and the treatment group was calculated (see Appendices A and B). Additionally, an overall mean change score for each group was calculated to use for comparison purposes and for the purpose of answering research question 1. For the control group, the mean pretest score was 2.6977 and the mean posttest score was 2.6512. The mean change score for the control group was -.0465 (see Table 1).

Table 1

Control Group Mean Score Comparison

Control group mean score comparison		
Pretest	Posttest	Change
2.6977	2.6512	-.0465

For the treatment group, the mean pretest score was 3.1795 and the mean posttest score was 3.3077. The mean change score for the treatment group was .1282 (see Table 2).

Table 2

Treatment Group Mean Score Comparison

Treatment group mean score comparison		
Pretest	Posttest	Change
3.1795	3.3077	.1282

The result for research question 1 was based on a comparison of the mean pretest-posttest change scores for the control and treatment groups. The mean change score for the control group was -.0465 (M = -.0465, SD = .95002). The mean change score for the treatment group was .1282 (M = .1282, SD = .86388). These scores indicated the

treatment group had a mean pretest-posttest change score .1747 greater than the control group.

Results for Research Question 2

Research question 2 asked: Is there a statistically significant difference between the mean pretest to posttest change scores of second graders who received direct instruction in writing conventions (treatment group) and the mean pretest to posttest change scores of second graders who did not receive direct instruction in writing conventions (control group) at an independent school in southeast Florida? In order to answer the second research question, an independent-samples *t*-test was conducted using the SPSS software to determine whether there was a statistically significant difference between the mean pretest to posttest change scores of the treatment group and the mean pretest to posttest change scores of the control group at the .05 level of significance. In analyses of variance, the 5% level is the maximum acceptable level for determining statistical significance (Cowles & Davis, 1982).

The null hypothesis stated that there would be no statistically significant difference at the .05 level of significance between the mean pretest to posttest change scores of second graders who received direct instruction in writing conventions and the mean pretest to posttest change scores of second graders who did not receive direct instruction in writing conventions at an independent school in southeast Florida. The results of the independent-samples *t*-test revealed there was no statistically significant difference in the mean change score between the control group and the treatment group, $t\ (80) = -.868$, $p = .388$. The difference in the mean change score between the control

group and the treatment group was greater than the .05 level of significance. Therefore, the researcher failed to reject the Null Hypothesis.

Chapter 5: Discussion

Introduction

Chapter five presents the summary of findings, the discussion of the findings, the implications of findings, the limitations of the study, the delimitations, and recommendations for future research. The focus of this quantitative research study was the problem of poor writing performance of second graders at an independent school in southeast Florida. According to the CPAA Administrator's Report generated at the research site, second grade scores on the Phonics/Writing section of the CPAA declined from a grade equivalency average of 3.4 at the end of school year 2009-2010 to a grade equivalency average of 2.9 at the end of school year 2011-2012. Additionally, the percentage of students in second grade who scored below grade level at the Approaching Expectation Level on the Phonics/Writing section of the CPAA increased from 6% at the end of school year 2009-2010 to 27% at the end of school year 2011-2012.

Summary of Findings

The purpose of this quantitative research study was to determine the impact of a direct writing conventions instructional strategy on the CPAA scores of independent school second graders at an independent school in southeast Florida. De-identified data were collected and analyzed from two separate second grade classes from two consecutive school years (i.e., 2011-2012, 2012-2013). The control group consisted of 43 second graders who received writing conventions instruction in the context of student writing during individual and small group writing conferences. Writing conferences were held during the independent writing time of writing workshop for the purpose of individualized instruction. During the student-teacher writing conferences, if a

conventions error was observed in a writing piece, the teacher would immediately provide instruction on the proper use of the convention only to that student. If the same convention error occurred in several students' writing pieces, then a small strategy group lesson would be provided to those students in the context of their writing. There was no direct instruction of writing conventions provided to the whole group. The treatment group consisted of 39 second graders who received direct writing conventions instruction through the use of mini-lessons during the writing workshop in addition to writing conventions instruction in the context of student writing during individual and small group conferences. Based on the skills found on the Second Grade Grammar Checklist and the errors found in the student's writing, the writing teacher wrote convention mini-lessons to address those skills. The mini-lessons were taught during the writing workshop using mentor texts and student writing pieces.

Research Question 1. The first research question asked: How do the CPAA Phonics/Writing subtest scores of second grade students who received direct writing conventions instruction compare to the CPAA Phonics/Writing subtest scores of second grade students who did not receive direct writing conventions instruction at an independent school in southeastern Florida? The result for Research Question 1 was that the mean change score for the control group was -.0465 (M = -.0465, SD = .95002). The mean change score for the treatment group was .1282 (M = .1282, SD = .86388). These scores indicated the treatment group had a mean pretest-posttest change score .1747 greater than the control group. The treatment group made greater gains on the Phonics/Writing subtest than the control group. Independent school second grade students who received direct instruction in writing conventions improved their writing

mechanics mastery more than independent school second grade students who did not receive direct instruction in writing conventions.

Research Question 2. The second research question asked: Is there a statistically significant difference between the mean pretest to posttest change scores of second graders who received direct instruction in writing conventions and the mean pretest to posttest change scores of second graders who did not receive direct instruction in writing conventions at an independent school in southeast Florida? The results of the independent-samples *t*-test revealed there was no statistically significant difference in the mean change score between the control group and the treatment group, t (80) = -.868, p = .388. These results suggested that direct writing conventions instruction does not have a significant impact on writing mechanics mastery. It should also be noted that the treatment group's average pretest score was higher (M = 3.1795) than the control group's pretest score (M = 2.6977). This would indicate that the treatment group started at a higher level of writing mechanics mastery than the control group.

Discussion of Findings

Although the result of the independent-samples *t*-test revealed there was no statistically significant difference in the mean change score between the treatment group and the control group, the treatment group demonstrated some positive results. In the treatment group, 33% of the second graders' posttest scores on the CPAA Phonics/Writing subtest increased. Conversely, in the control group, only 23% of the second graders' posttest scores on the Phonics/Writing subtest increased. Additionally, 90% of the treatment group received a grade expectation score of At or Above Expectation on the posttest CPAA Phonics/Writing subtest, whereas only 65% of the

control group received a grade expectation score of At or Above Expectation. More specifically, 41% of the treatment group received a grade expectation of Above Expectation on the posttest CPAA Phonics/Writing subtest, yet 0% of the control group received a grade expectation of Above Expectation.

The positive results demonstrated by the treatment group in this study were consistent with the most current theories and research in the field and appear to support much of the existing literature. Graham, McKeown, Kiuhare, and Harris (2012) conducted a meta-analysis of writing intervention literature in an effort to identify effective instructional practices for teaching writing to elementary grade students. Of the six writing interventions that involved direct instruction of writing processes, skills, or knowledge, Graham et al. (2012) concluded that all but one, grammar instruction in isolation, produced statistically significant effects. Although this research study did not show a statistically significant difference between the group receiving direct instruction within the writing workshop and the control group, results were more positive for the direct instruction group than for the control group.

In a similar meta-analysis to identify effective practices for teaching writing to adolescents, Graham and Perin (2007a) found that grammar instruction in isolation was not an effective instructional strategy. A seminal meta-analysis conducted over twenty-five years prior by Hillocks (1986) yielded the same finding; independent grammar instruction was ineffective in improving writing. The results of this research study were consistent with the findings of both Graham and Perin (2007a) and Hillocks (1986). The control group receiving writing mini-lessons taught independently, on average, did not demonstrate improved writing. The direct instruction of writing conventions via mini-

lessons during writing workshop did not result in a statistically significant difference in writing mechanics mastery of independent school second graders.

A further study conducted by Myhill, Lines, and Watson (2012) found strong evidence for the value of using grammar as a way to help young writers make meaning, although they concluded it was unlikely that the quality of writing would improve when grammar was taught as a distinct, separate topic. Myhill, Lines, and Watson asserted that actively engaging students in making connections between grammar instruction, writing, and its proper usage could be a powerful and effective strategy for improving writing. These findings can be related to the results of this research study. The direct instruction of writing conventions in the current research study was done in the context of both mentor authors' writing and student writing. The writing convention mini-lessons were focused on a discrete skill, yet the connection between the instruction of the skill, the model writing, and its proper use was neither stressed nor reinforced. The direct instruction of writing conventions as a distinct, separate topic did not result in a statistically significant difference between the control group and the treatment group.

The findings of this study also support research that concluded the writing workshop model is an effective instructional method to reinforce writing skills (Daly & Sharko; 2010 Jasmine & Weiner, 2007). The writing workshop structure provides opportunities for direct instruction, guided practice, independent practice, and individualized instruction, as well as provides support for students to become independent writers (Jasmine & Weiner, 2007). The writing workshop also allows young writers to share and collaborate on their writing thus increasing motivation and encouraging meaningful compositions (Daly & Sharko, 2007). The independent school

second graders at the research site performed at a level that supports these findings. At least 65% of students in both the control group and the treatment group performed At or Above Expectation on the CPAA Phonics/Writing subtest.

Implications of Findings

The results of this research support recommendations for continuing the use of direct instruction of writing conventions in the writer's workshop model. This will increase opportunities for students to become more efficient in correctly applying writing conventions in their writing thus increasing writing mechanics mastery. According to these findings, one possible implication of results is that more classrooms should utilize direct instruction of writing conventions in the writer's workshop model.

Another possible implication is that the use of a combination of direct instruction and individualized instruction affects writing mechanics mastery. This research study utilized a direct writing mechanics instructional method via the mini-lessons in conjunction with individualized writing conventions instruction during student-teacher conferences. The results of this study could imply that the combination of these two methods made a positive impact on second graders' writing mechanics mastery.

The implications of this study lend credence to the idea that direct instruction of writing conventions has a positive impact on writing mechanic mastery. Although the result of the independent-samples *t*-test revealed there was no statistically significant difference in the mean change score between the treatment group and the control group, the positive results demonstrated by the treatment group imply that the direct instruction of writing conventions in the writing workshop lead to increased writing mechanics mastery.

Limitations of Study

There were some specific limitations to this research study. The first limitation of this research study was that the study was conducted at only one selected independent school with its unique student demographic composition. Therefore, the findings of these students cannot be transferred to other educational settings with different student demographics. Additionally, the study of only second-grade students may not be relevant to other grade levels in terms of the effectiveness of a direct writing instructional strategy. Other grade levels may have more or less success with direct instruction depending upon the developmental level and attention span of the students. Furthermore, only the area of writing at the second-grade level was analyzed and cannot be applied to other subject areas. Other subject areas contain concepts and skills that may or may not be taught effectively using direct instruction.

A further limitation was that this research study only examined one year of data to determine the impact of a direct instruction strategy on second graders' writing mechanics mastery. The examination of only one year of data may not be relevant in terms of the effectiveness of the direct instruction strategy. The effectiveness of the direct instruction strategy may be better determined by examining the data over several years.

An additional limitation was the history threat to internal validity that was identified by Edmonds and Kennedy (2013) as the most common threat in posttest research design. Creswell (2013) stated that "in educational experiments, it is impossible to have a tightly controlled environment and monitor all events" (p. 304). Events that occurred between the pretest and posttest may have influenced the outcomes of the study findings.

Delimitations

This study was limited to the population of second-grade students at one independent school in southeast Florida. The researcher did not include other second graders from other independent schools in this study because the research site was one of the only independent schools in the area implementing the writer's workshop instructional model. Other independent schools in the area were not as familiar or experienced with the writer's workshop instructional model.

Additionally, other grade levels from the research site were not included in the population of this study. Teachers at the research site received professional development on the writer's workshop instructional model from literacy coaches who had been trained through The Columbia Teachers College Reading and Writing Project. The literacy coaches were assigned to specific grade levels. Teachers from other grade levels may not have had the same level or amount of training on the writer's workshop model due to the differences in the literacy coaches' experience and training schedules. Therefore, for the sake of instructional consistency, only one grade level was included in the research study's population.

Recommendations for Future Research

There is opportunity for future research related to the focus of this research study. The findings of this study supported the following recommendation for future research: (a) conduct a study across grade levels, (b) provide teachers with professional development opportunities on direct instruction of writing conventions, and (c) conduct a phenomenological research study and interview teachers to understand their experiences on utilizing direct instruction of writing conventions.

Because this research study focused on the writing of second graders, it would be beneficial for future research studies involving direct instruction of writing conventions to be conducted across all grade levels. This future research could be used to determine whether direct instruction of writing conventions makes an impact in all grade levels or whether one grade level is impacted more than another is. Additionally, investigating the impact of direct writing conventions instruction over the course of several years may be beneficial as well.

Future research could also be done in relation to professional development. Yoon, Duncan, Lee, and Shapley (2008) stated that professional development that enhances teacher knowledge, skills, and motivation improves classroom teaching and leads to raised student achievement. A useful study to conduct would be to investigate the effects of professional development on the instructional practices of direct instruction of writing conventions and student achievement. Research on the effects of professional development on teacher perceptions of direct writing conventions instruction could also be conducted. In addition, the effects of the amount and frequency of professional development opportunities may be a worthwhile research study because it would lead to information about whether a correlation could be made between professional development and direct instruction of writing conventions.

In order to gain knowledge about the experiences of teachers using direct instruction of writing conventions, a phenomenological research study could be conducted. The phenomenological approach is utilized when researchers are “interested in exploring the meaning, composition, and core of the lived experience of specific phenomena” (Edmonds & Kennedy, 2013, p.136). The knowledge and information

gained from the participants' descriptions of their experiences could lead to instructional opportunities to aid students in correctly applying conventions to their writing. In addition, this type of study could add to the understanding of how teachers embrace or resist change in instructional practices. Hall and Horde (2015) stated that understanding resistance to change is crucial in order for change initiatives to be successful.

Although the overall performance of the treatment group showed no statistically significant difference from the control group, the study indicated some positive results. As a result, the researcher recommends that the faculty at the research site continue the use of direct instruction of writing conventions within the writer's workshop model in second grade in addition to the instruction of writing conventions in the context of student writing. Other schools utilizing the writer's workshop model should also consider combining the use of direct instruction to teach writing conventions with instruction in the context of student writing. This will increase opportunities for students to become more proficient in correctly applying writing conventions to their writing which will lead to an increase in student writing achievement. More grade levels should also be encouraged to utilize direct instruction of writing conventions within the writing workshop model.

References

Anderson, C. (2000). *How's it going? A practical guide to conferring with student writers*. Portsmouth, NH: Heinemann.

Anderson, C. (2005). *Assessing writers*. Portsmouth, NH: Heinemann.

Anderson, C. (2010, March). *Conferring with student writers*. Paper presented at the meeting of Near East South Asia Council of Overseas Schools, Bangkok, TN.

Andrade, H. G. (1997). Understanding rubrics. *Educational Leadership, 54*(4), 14-17.

Andrews, R., Torgerson, C., Beverton, S., Freeman, A., Locke, T., Graham, L., . . . Zhu, D. (2006). The effect of grammar teaching on writing development. *British Educational Research Journal*, *32*(1), 39-55.

Angelillo, J. (2002). *A fresh approach to teaching punctuation*. New York, NY: Scholastic.

Ary, D. Jacobs, L. C., & Sorensen, C. (2008). *Introduction to research in education* (8th ed.). Belmont, CA: Wadsworth.

Barlow, D. (2003). Because writing matters: Improving student writing in our schools. *The Education Digest, 68*(9), 56-57.

Barone, D., & Taylor, J. M. (2007). *The practical guide to classroom literacy assessment*. Thousand Oaks, CA: Corwin Press.

Barrows, C. J. (2010). *The effects of teaching a science topic in the regents living environment course in a mini-lesson instructional* environment (Doctoral dissertation). Retrieved from http://search.proquest.com.ezproxylocal.library.nova.edu/docview/757230061?accountid=6579

Bednar, A. K., Cunningham, D., Duffy, T. M., & Perry, J. D. (1995). Theory into practice: How do we link? In. G. J. Anglin (Ed.), *Instructional technology: Past, present, and future* (pp. 100-112). Englewood, CO: Libraries Unlimited.

Beesley, L. D. (2009). *Effects of a comprehensive writing intervention on writing achievement of fifth-grade students* (Doctoral dissertation). Retrieved from http://p8080-marps.library.nova.edu.ezproxylocal.library.nova.edu/MARPs/PDF/apd/8650.pdf

Berlin, J. A. (1987). *Rhetoric and reality: Writing instruction in American colleges, 1900-1985*. Carbondale, IL: Southern Illinois University Press.

Blaauw-Hara, M. (2006). Why our students need instruction in grammar, and how we should go about it. *Teaching English in the Two-Year College*, *34*(2), 165-178.

Braddock, R., Lloyd-Jones, R., & Schoer, L. (1963). *Research on written composition*. Urbana, IL: National Council of Teachers of English.

Bragen, B. F., Jr. (2007). *Increasing the written language skills of elementary students using writers' workshop* (Doctoral dissertation). Retrieved from http://p8080 -marps.library.nova.edu.ezproxylocal.library.nova.edu/MARPs/PDF/apd/7562.pdf

Brantley, C. (2008). *The effects of imbedding grammar into writing instruction in small-group settings* (Doctoral dissertation). Retrieved from http://p8080-marps .library.nova.edu.ezproxylocal.library.nova.edu/MARPs/PDF/apd/8020.pdf

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*(1), 32-42.

Broz, W. (2001). Literacy license. *Voices from the Middle*, *10*(3), 43-45.

Calkins, L. (1994). *The art of teaching writing* (2nd ed.). Portsmouth, NH: Heinemann.

Calkins, L. (2003). *The nuts and bolts of teaching writing*. Portsmouth, NH: Heinemann.

Camacho, C. (2010). *CPAA Technical Report*. New York, NY: Children's Progress. Retrieved from http://www.childrensprogress.com/wpcontent/uploads /2011/11/cpaa-adaptive-assessment-technical-report.pdf

Camp, R. (1993). The place of portfolios in our changing views of writing assessment. In R. E. Bennet & W. C. Ward (Eds.), *Construction versus choice in cognitive measurement: Issues in constructed responses, performance testing and portfolio assessment* (pp. 183-212). Hillsdale, NJ: Lawrence Erlbaum Associates.

Clark, I. L. (2012). *Concepts in composition: Theory and practice in the teaching of writing* (2nd ed.). New York, NY: Routledge.

Committee of Ten of the National Education Association. (1893). *Report of the committee of ten on secondary school studies, with the reports of the conferences arranged by the committee*. (Report No. 205). Washington: Government Printing Office. Retrieved from http://archive.org/details/cu31924030593580

Condon, W. (2012). The future history of portfolio-based writing assessment: A cautionary tale. In E. Norbert & L. Perelman (Eds.), *Writing assessment in the 21st century: Essay in honor of Edward M. White* (part II). Cresskill, NJ: Hampton Press.

Cowles, M., & Davis, C. (1982). On the origins of the .05 level of statistical significance. *American Psychologist, 37*(5), 553-558.

Cramer, R. (2004). *Language arts: A balanced approach to teaching reading, writing, listening, talking and thinking.* Boston, MA: Allyn and Bacon.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.

Culham, R. (2005). *6+1 Traits of writing: The complete guide for the primary grades*. New York, NY: Scholastic.

Daly, L., & Sharko, S. (2010). *Motivating students to write through the use of children's literature* (Master's thesis). Retrieved from http://eric.ed.gov.ezproxylocal.library.nova.edu/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED509396&ERICExtSearch_SearchType_0=no&accno=ED509396

Davis, J., & Hill, S. (2003). *The no-nonsense guide to teaching writing: Strategies, structures, and solutions*. Portsmouth, NH: Heinemann.

Dorn, L. J., & Soffos, C. (2001). *Scaffolding young writers: A writer's workshop approach.* Portland, ME: Stenhouse.

Edmonds, A. W., & Kennedy, T. D. (2013). *An applied reference guide to research designs: Quantitative, qualitative, and mixed methods.* Thousand Oaks, CA: Sage.

Elley, W. B., Barham, I. H., Lamb, H., & Wyllie, M. (1976). The role of grammar in secondary English curriculum. *Research in the Teaching of English*, *10*(1), 5-21.

Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 6*(4), 50-72.

Feng, S., & Powers, K. (2005). The short- and long-term effect of explicit grammar instruction on fifth graders' writing. *Reading Improvement, 42*(2), 67-72.

Fisher, B. (1995). Writing workshop in a first grade classroom. *Teaching Pre K-8, 26*(3), 66-68.

Fountas, I. C., & Pinnell, G. S. (2000). *Guiding readers and writers.* Portsmouth, NH: Heinemann.

Fountas, I. C., & Pinnell, G. S. (2001). *Guiding readers and writers, Grades 3-6*. Portsmouth, NH: Heinemann.

Gall, M. D., Gall, J. P., & Borg, W. R. (2006). *Educational research: An introduction* (8th ed.). Boston, MA: Pearson.

Gardner, D. P. (1983). A nation at risk. *Washington, D. C.: The National Commission on Excellence in Education, U.S. Department of Education.*

Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences*. New York, NY: Harper and Collins.

Graham, S., McKeown, D., Kiuhara, S., & Harris, K. R. (2012). A meta-analysis of writing instruction for students in the elementary grades. *Journal of Educational Psychology*, *104*(4), 879-896.

Graham, S., & Perin, D. (2007a). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, *99*(3), 445-476.

Graham, S., & Perin, D. (2007b). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools – A report to Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.

Graves, D. H. (1983). *Writing: Teachers and children at work*. Portsmouth, NH: Heinemann.

Graves, D. H. (1994). *A fresh look at writing*. Portsmouth, NH: Heinemann.

Graves, D. H. (2003). *Writing: Teachers and children at work* (20th anniversary ed.). Portsmouth, NH: Heinemann.

Green, S. B., & Salkind, N. J. (2012). *Using SPSS for windows and macintosh: Analyzing and understanding data*. Upper Saddle River, NJ: Pearson.

Gregorc, A. F. (1985). *Inside styles: Beyond the basics*. Maynard, MA: Gabriel Systems.

Hall, G. E., & Hord, S. M. (2015). *Implementing change: Patterns, principles, and potholes* (4th ed.). Upper Saddle River, NJ: Pearson.

Harper, D. (2003). *Foundations of cognitive grammar*. Retrieved from http ://ebookbrowse.com/foundations-of-cognitive-grammar-pdf -d189607815

Harris, K. R., & Graham, S. (1994). Constructivism: Principles, paradigms, and integration. *The Journal of Special Education*, *28*(3), 233-247.

Harris, K. R., Graham, S., & Mason, L. H. (2006). Improving the writing, knowledge, and motivation of struggling young writers: Effects of self-regulated strategy

development with and without peer support. *American Educational Research Journal*, *42*(2), 295-340.

Harris, K. R., Graham, S., Mason, L. H., & Saddler, B. (2002). Developing self-regulated writers. *Theory Into Practice*, *41*(2), 110-115.

Hatfield, W. W. (1935). *An experience curriculum in English. A report of the curriculum commission, national council of teachers of English.* New York, NY: D. Appleton-Century.

Higgins, R., Hartley, P., & Skelton, A. (2002). The conscientious consumer: Reconsidering the role of assessment feedback in student learning. *Studies in Higher Education*, *27*(1), 53-64.

Hillocks, G., Jr. (1986). *Research on written composition: New direction for teaching*. Urbana, IL: National Council of Teachers of English.

Hobbs, C. A., & Berlin, J. A. (2001). A century of writing instruction in school and college English. In J. J. Murphy (Ed.), *A short history of writing instruction: From ancient Greece to modern America* (pp. 247-289). Mahwah, NJ: Lawrence Erlbaum Associates.

Hoffman, S. J., & Topping, D. H. (2008). Teaching grammar without sacrificing reading and writing. *Journal of Reading Education*, *33*(3), 32-34.

Hosic, J. F. (comp.). (1917). *Reorganization of English in secondary schools*. Report by the National Joint Committee on English Representing the Commission on the Reorganization of Secondary Education of the National Education Association and the National Council of Teachers of English. US Bureau of Education, Bulletin, No. 2.

Huck, S. W. (2012). *Reading statistics and research* (6th ed.). Boston, MA: Pearson.

International Reading Association & National Council of Teachers of English. (2009). *Standards for the assessment of reading and writing*. Newark, DE: IRA and NCTE.

Jasmine, J., & Weiner, W. (2007). The effects of writing workshop on abilities of first grade students to become confident and independent writers. *Early Childhood Education Journal*, *35*(2), 131-139.

Jonassen, D. H. (1991). Evaluating constructivist learning. *Educational Technology*, *31*(9), 28-33.

Kantor, K. J. (1975). Creative expression in the English curriculum. *Research in the Teaching of English*, *9*(1), 5-29.

Keys, C. W. (2000). Investigating the thinking process of eighth grade writers during the composition of a scientific lab report. *Journal of Research in Science Teaching, 37*(7), 676-690.

Kirby, D., Kirby, D., & Liner, T. (2003). *Inside out: Strategies for teaching writing*. Portsmouth, NH: Heinemann-Boynton/Cook.

Koretz, D. (1988). Arriving in Lake Wobegon: Are standardized tests exaggerating achievement and distorting instruction? *American Education*, *12*(2), 8-16.

Langacker, R. W. (1987). *Foundations of cognitive grammar: Theoretical prerequisites* (Vol. 1). Stanford, CA: Stanford University Press.

Langacker, R. W. (1990). *Concept, image, and symbol: The cognitive basis of grammar*. Berlin, Germany: Mouton de Gruyter.

Langacker, R. W. (2008). *Cognitive grammar: A basic introduction*. New York, NY: Oxford University Press.

Lobmeier, J. H. (2010). Nonexperimental designs. In N. J. Salkind (Ed.). *Encyclopedia of research design*. doi: http://dx.doi.org/10.4135/9781412961288

Low, G., Robinson, A., & Zhu, D. (2006). The effect of grammar teaching on writing development. *British Educational Research Journal*, *32*(1), 39-55.

McAlexander, P. J. (2000). Checking the grammar checker: Integrating grammar instruction with writing. *Journal of Basic Writing*, *39*(2), 124-140.

Monaghan, J. E., & Saul, W. E. (1987). The reader, the scribe, and thinker: A critical look at the history of American reading and writing instruction. In T. S. Popkewitz (Ed.), *The formation of school subjects: The struggle for creating an American institution* (pp. 85-122). New York, NY: Falmer Press.

Muijs, D. (2011). *Doing quantitative research in education with SPSS* (2nd ed.). London, UK: Sage.

Myhill, D. A., Jones, S. M., Lines, H., & Watson, A. (2011). Re-thinking grammar: The impact of embedded grammar teaching on students' writing and students' metalinguistic understanding. *Research Papers in Education*, *27*(2), 139-166.

Myhill, D.A., Lines, H., & Watson, A. (2012).Making meaning with grammar: A repertoire of possibilities. *English in Australia*, *47*(3), 29-38.

National Center for Education Statistics. (2012). *The nation's report card: Writing 2011* (NCES 2012-470). Retrieved from http://nces.ed.gov/nationsreportcard/pubs /main2011/2012470.asp

National Council of Teachers of English. (2008). *NCTE beliefs about the teaching of writing*. Retrieved October 5, 2013, from http://www.ncte.org/governance/writing

Nielsen, K. (2014). Self-assessment methods in writing instruction: A conceptual framework, successful practices and essential strategies. *Journal of Research in Reading, 37*(1), 1-16.

Noden, H. (1999). *Image grammar: Using grammatical structures to teach writing*. Portsmouth, NH: Boyton/Cook.

Noguchi, R. R. (1991). *Grammar and the teaching of writing: Limits and possibilities*. Urbana, IL: National Council of Teachers of English.

O'Neill, P., Murphy, S., Hout, B., & Williamson, M. M. (2005). What teachers say about different kinds of mandated state writing tests. *Journal of Writing Assessment, 2(*2), 81-108.

Patterson, N. G. (2001). Just the facts: Research and theory about grammar instruction. *Voices from the Middle*, *8*(3), 50-55.

Pearson, P. D. (2004). The reading wars. *Educational Policy*, *18*(1), 216-252.

Peha, S. (2003a). *Welcome to writer's workshop: Teaching young writers the way professionals teach themselves*. Retrieved on October 5, 2013 from http://www.ttms.org/PDFs/05%20Writers%20Workshop%20v001%20(Full).pdf

Peha, S. (2003b). *Writing across the curriculum*. Retrieved November 3, 2013, from http://www.ttms.org/PDFs/06%20Writing%20Across%20the%20Curriculum%20v001%20(Full).pdf

Perkins, D. N. (1991). Technology meets constructivism: Do they make a marriage? *Educational Technology*, *31*(5), 18-23.

Phipps, S., & Borg, S. (2009). Exploring tensions between teachers' grammar teaching beliefs and practices. *System*, *37*(3), 380-390.

Price, J. A. (1998). *Language arts instruction: A comparison of traditional grammar instruction and writing workshop approach.* Marshall, MN: Southwest State University.

Quible, Z. K., & Griffin, F. (2007). Are writing deficiencies creating a lost generation of business writers? *Journal of Education for Business*, *83*(1), 32-36.

Radden, G., & Dirven, R. (2007). *Cognitive English grammar.* Amsterdam, NL: John Benjamins.

Reese, W. J. (2013). *Testing wars in the public schools: A forgotten history.* Cambridge, MA: Harvard University Press.

Reeves, D. (2002). *Reason to write: Help your child succeed in school and in life through better reasoning and clear communication*. New York, NY: Kaplan.

Richardson, M. (2008). Writing is not just a basic skill. *Chronicle of Higher Education, 55*(11), 47. Retrieved from http://search.proquest.com.ezproxylocal.library .nova.edu/docview/214646073?accountid=6579

Richardson, V. (1997*). Constructivist teacher education: Building new understandings.* Bristol, PA: Taylor & Francis.

Saddler, B., & Andrade, H. (2004). The writing rubric. *Educational Leadership, 62*(2), 48-52.

Sheils, M. (1975, December 8). Why Johnny can't write. *Newsweek, 92*(8) 58-63.

Singagliese, J. (2012). *Writer's workshop: Effects on achievement, attitude, and instructional practices* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3504323)

Sloan, W. (2010). Coming to terms with common core standards. *INFObrief, 16*(4). Retrieved from http://www.ascd.org/publications/newsletters/policy-priorities /vol16/issue4/toc.aspx

Smithson, M. S. (2008). *Academic effects of writer's workshop* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3324653)

Spring, J. (2005). *The American School 1642-2004.* New York, NY: McGraw-Hill.

Spiro, R. J., Feltovich, P. J., Jacobson, M. J., & Coulson, R. L. (1991). Cognitive flexibility, constructivism, and hypertext: Random access instruction for advanced knowledge acquisition in ill-structured domains. *Educational Technology, 31*(5), 24-33.

Stiggins, R. J. (1982). A comparison of indirect and direct writing assessment methods. *Research in the Teaching of English, 16*(2), 101-114. Retrieved from http://www .jstor.org/stable/40170937

Strauss, V. (2012, May 21). Test scores plummet – so Florida drops passing grade. *The Washington Post*. Retrieved from http://www.washingtonpost.com/blogs/answer -sheet/post/test-scores-plummet--so-florida-drops-passing-grade/2012/05/21 /gIQAzopIeU_blog.html

Tompkins, G. (2002). *Language arts: Patterns of practice.* Upper Saddle River, NJ: Pearson Prentice Hall.

Topping, D. H., & Hoffman, S. J. (2006). *Getting grammar: 150 new ways to teach an old subject.* Portsmouth, NH: Heinemann.

Tracy, B., Reid, R., & Graham, S. (2009). Teaching young students strategies for planning and drafting stories: The impact of self-regulated strategy development. *The Journal of Educational Research*, *102*(5), 323-331.

Troia, G. A. (2007). Research in writing instruction: What we know and what we need to know. In M. Pressley, A. Billman, K. Perry, K. Refitt, & J. M. Reynolds (Eds.), *Shaping literacy achievement: Research we have, research we need* (pp. 129-156). New York, NY: Guilford Press.

Troia, G. A., Shankland, R. K., & Heintz, A. (2010). *Applications for teacher professional development.* New York, NY: Guilford Press.

Troia, G. A., Shin-ju, C., Cohen, S., & Monroe, B. (2011). A year in the writing workshop. *The Elementary School Journal*, *112*(1), 155-182.

Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.

Weaver, C. (1996). *Teaching grammar in context: Why and how.* Portsmouth, NH: Heinemann-Boynton/Cook.

Weaver, C. (1998). *Lessons to share: On teaching grammar in context*. Portsmouth, NH: Heinemann-Boynton/Cook.

Weaver, C. (2008). *Grammar to enrich & enhance writing*. Portsmouth, NH: Heinemann.

Weaver, C., McNally, C., & Moerman, S. (2001). To grammar or not to grammar: That is not the question! *Voices from the Middle*, *8*(3), 17-33.

Weaver, C., Bush, J., Anderson, J., & Bills, P. (2006). Grammar intertwined throughout writing process: An "inch wide and a mile deep." *English Teaching: Practice and Critique*, *5*(1), 77-101.

Yancey, K. B. (2009). *Writing in the 21st Century.* National Council of Teachers of English. Retrieved from http://www.ncte.org/library/NCTEFiles/Press /Yancey_final.pdf

Yoon, K. S., Duncan, T., Lee, S., & Shapley, K. (2008, March). *The effects of teachers' professional development on student achievement: Findings from a systematic review of evidence.* Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY. Abstract retrieved from

http://www.pdal.net/inc/docs/AERA%202008%20Paper_final_PD%20research%20review.pdf

Appendix A

Control Group Score Comparison

Control Group Score Comparison

Control Group (2011-2012 second graders) N=43			
Student	Pretest	Posttest	Change
1	4	2	-2
2	3	2	-1
3	1	2	+1
4	3	3	No change
5	3	3	No change
6	4	3	-1
7	3	3	No change
8	3	2	-1
9	3	2	-1
10	3	2	-1
11	3	3	No change
12	2	3	+1
13	3	3	No change
14	3	3	No change
15	2	3	+1
16	3	3	No change
17	4	3	-1
18	4	3	-1
19	3	3	No change
20	3	3	No change
21	1	3	+2
22	1	3	+2
23	3	2	-1
24	2	2	No change
25	3	2	-1
26	1	2	+1
27	3	3	No change
28	4	3	-1
29	4	3	-1
30	1	3	+2
31	3	3	No change
32	2	2	No change
33	3	2	-1
34	3	3	No change
35	3	3	No change
36	2	3	+1
37	2	2	No change
38	1	3	+2
39	3	3	No change
40	3	3	No change
41	3	3	No change
42	2	2	No change
43	3	2	-1
Mean	2.6977	2.6512	-.0465

Appendix B

Treatment Group Score Comparison

Treatment Group Score Comparison

Treatment Group (2012-2013 second graders) N=39			
Student	Pretest	Posttest	Change
1	4	3	-1
2	3	4	+1
3	3	4	+1
4	3	3	No change
5	2	3	+1
6	3	3	No change
7	4	3	-1
8	4	4	No change
9	2	3	+1
10	3	4	+1
11	4	4	No change
12	3	2	-1
13	1	2	+1
14	3	3	No change
15	4	3	-1
16	3	3	No change
17	3	4	+1
18	3	3	No change
19	3	2	-1
20	4	3	-1
21	4	4	No change
22	3	4	+1
23	4	3	-1
24	4	4	No change
25	4	4	No change
26	3	4	+1
27	3	3	No change
28	3	3	No change
29	3	3	No change
30	3	3	No change
31	3	4	+1
32	3	4	+1
33	4	4	No change
34	4	3	-1
35	1	3	+2
36	3	4	+1
37	3	4	+1
38	3	3	No change
39	4	2	-2
Mean	3.1795	3.3077	.1282